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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,085	10/22/2003	Tsuyoshi Ogawa	09792909-5704	9289
26263 7590 01/03/2007 SONNENSCHN NATH & ROSENTHAL LLP P.O. BOX 061080 WACKER DRIVE STATION, SEARS TOWER CHICAGO, IL 60606-1080			EXAMINER WOOD, KEVIN S	
			ART UNIT	PAPER NUMBER
			2874	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/03/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/691,085	Applicant(s) OGAWA, TSUYOSHI	
	Examiner Kevin S. Wood	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 9-17 and 21-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL REJECTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5 December 2006 has been entered.

Response to Amendment After Final

2. The request for continued examination was filed in order to have the After Final Amendment, filed on 25 September 2006, entered and to have the arguments considered. Claims 1 and 18 were amended. Claims 1-8 and 18-20 are remain pending in the application. Claims 9-17 and 21-25 have been withdrawn from consideration as non-elected inventions.

Response to Arguments

3. Applicant's arguments filed 25 September 2006 have been fully considered but they are not persuasive. The examiner has thoroughly reviewed the applicant's arguments but firmly believes the cited references to reasonably and properly meet the claimed limitations. The applicant's primary argument was that U.S. Patent No.

Art Unit: 2874

6,892,398 to Ouchi does not disclose all the limitations of the claimed invention of claim 1 or claim 18. Specifically the applicant argues that the Ouchi reference does not disclose the optical interconnect circuit (276,278) and the micro interconnect circuit section (275) being layered on the base substrate.

4. The applicant argues that because the optical interconnect circuit (276), including the light emitting and photo detecting device (278), and the micro interconnect section (275) are mounted together within the cladding (insulating layer 277), they cannot be considered to be layered on the base substrate. The examiner respectfully disagrees with this argument. See Fig. 18, where the optical interconnect circuit (276), including the light emitting and photo detecting devices (278), and the micro interconnect section (275) are layered on the base substrate, where the base substrate is formed by the interconnect layer (279) and the insulating substrate (273). The fact that the Ouchi reference discloses the two components being layered within a cladding layer does not differentiate the claims over the prior art. The applicant is reminded that the claims language using the word "comprising" allows for other components and features which have not been claimed to be present.

The applicant also seems to be implying that because the Ouchi reference discloses an optical interconnect circuit (276,278) above and below the micro interconnect section (275) that they two aren't layered. The examiner respectfully disagrees with this argument as well. Once again the use of the word "comprising" in the preamble of the claims allows for additional elements to be present. Therefore having additional optical interconnect circuits is not precluded by the claim language.

The applicant has failed to point out any *claimed* limitations which the Ouchi reference fails to disclose or make obvious. Therefore, the rejections are believed to be reasonably and fair.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,829,398 to Ouchi.

Referring to claims 1-8, the Ouchi reference discloses an optoelectronic comprising: a base substrate section having an interconnect layer (279) formed on an insulating substrate (273); a micro interconnect circuit section having a micro electrical interconnect layer (275) which is finer than the interconnect layer of the base substrate section, formed on an insulating layer (277); and an optical interconnect circuit section adapted to transfer and/or receive an optical signal and provided with an optical waveguide (276) having an input section and an output section an optical signal at opposite ends thereof; and an optical element composed of a light emitting device (278) with a light emitting section thereof facing the input section and a photo detecting device (278) with a photo detecting section thereof facing the output section; wherein the micro interconnect circuit section and the optical interconnect circuit section are mounted on

Art Unit: 2874

the base substrate section so as to transmit an electrical signal and an optical signal.

See Fig. 18 along with its respective portion of the specification. It should be noted that this claim is a device claim, therefore the limitations directed to how each component were made are not considered during the determination of patentability of the device.

The Ouchi reference does not appear to specifically disclose that the insulating layer is a resin layer. Resin layers are known in the art and the application does not disclose the criticality or unexpected results from using a resin to form the insulating layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a resin for the insulating layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended. *In re Leshin*, 125 USPQ 416.

Referring to claims 18-20, the Ouchi reference discloses an optoelectronic comprising: a base substrate section having an interconnect layer (279) formed on an insulating substrate (273); a micro interconnect circuit section having a micro electrical interconnect layer (275) which is finer than the interconnect layer of the base substrate section, formed on an insulating layer (277); and an optical interconnect circuit section adapted to transfer and/or receive an optical signal and provided with an optical waveguide (276) having an input section and an output section an optical signal at opposite ends thereof; and an optical element composed of a light emitting device (278) with a light emitting section thereof facing the input section and a photo detecting device (278) with a photo detecting section thereof facing the output section; wherein the micro interconnect circuit section and the optical interconnect circuit section are mounted on

Art Unit: 2874

the base substrate section so as to transmit an electrical signal and an optical signal. The Ouchi reference also discloses electronic components (270) mounted on a surface of the base substrate (273), and electrically connected to one of the interconnect layers (275,279) and the optical elements (278). See Fig. 18 along with its respective portion of the specification. It should be noted that this claim is a device claim, therefore the limitations directed to how each component were made are not considered during the determination of patentability of the device. The Ouchi reference does not appear to specifically disclose that the insulating layer is a resin layer. Resin layers are known in the art and the application does not disclose the criticality or unexpected results from using a resin to form the insulating layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a resin for the insulating layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended. *In re Leshin*, 125 USPQ 416.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone

Art Unit: 2874

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kevin S. Wood
Primary Examiner